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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,197	04/09/2001	Thomas R. Giallorenzi	907.0013USU	6842
29683	7590	04/12/2006	EXAMINER	
HARRINGTON & SMITH, LLP			CHO, HONG SOL	
4 RESEARCH DRIVE			ART UNIT	
SHELTON, CT 06484-6212			PAPER NUMBER	
			2616	

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/829,197

Applicant(s)

GIALLORENZI ET AL.

Examiner

Hong Cho

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/2/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on 02/02/2006. Claims 1-27 are pending in the instant application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1, 3-14, and 16-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al (U.S 6021333), hereinafter referred to as Anderson in view of Watanabe et al (U.S 5802110), hereinafter referred to as Watanabe.

Re claims 1 and 14, Anderson discloses a mobile communication system comprising mobile stations and base stations (*a communication system having subscriber stations (SS) and base stations (BS)*, column 14, lines 63-65). Anderson discloses using same traffic message structure for forward and reverse link communication (*arranging a forward link and a reverse link to operate with a common waveform*, figures 5b and 5c;

column 8, lines 34-36). Anderson fails to disclose the forward link operating at a first frequency that is transmitted by the BS and received by the SS, and the reverse link operating at a second frequency that is transmitted by the SS and received by the BS. Watanabe discloses the mobile station receiving the first signal with the frequency f_1 and transmitting the second signal with the frequency f_2 (column 6, lines 20-25). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Anderson to have the forward link operating at a first frequency and the reverse link operating at a second frequency in order to avoid interference between base stations and mobile stations. Anderson discloses an exemplary transmitter and receiver employed for spreading and despreading signals by using a single chip sequence generator (*using common forward link and reverse link signal processing circuitry in the BS and individual ones of the SSs*, column 6, lines 37-43).

Re claims 3 and 16, Anderson discloses the same message structure used for both forward and reverse link communication (*common wave form enables essential parameters of the forward and reverse link to be the same*, column 8, lines 45-60).

Re claims 4 and 17, Anderson discloses essential parameters comprising a modulation format (figure 2, elements 205 and 211).

Re claims 5 and 18, Anderson discloses essential parameters comprising a chip rate (figure 2, elements 204 and 210).

Re claims 6 and 19, Anderson discloses essential parameters comprising a symbol rate (column 7, lines 10-12).

Re claims 7 and 20, Anderson discloses essential parameters comprising a bit rate (column 7, lines 14-16).

Re claims 8, 9, 21 and 22, Anderson discloses essential parameters comprising a frame or superframe rate (figures 5b and 5c, elements 515 and 545).

Re claims 10 and 23, Anderson discloses essential parameters comprising a frame structure (figures 5b and 5c).

Re claims 11 and 24, Anderson discloses essential parameters comprising an error control coding scheme (figures 5b and 5c, elements 531 and 561).

Re claims 12 and 25, Anderson discloses essential parameters comprising synchronization words (figures 5b and 5c, elements 523 and 5531).

Re claims 13 and 26, Anderson discloses essential parameters comprising a control field structure (figures 5b and 5c, elements 527 and 557).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 15, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Watanabe and further in view of Moravan et al (U.S 6894992), hereinafter referred to as Moravan.

Re claims 2 and 15, Anderson discloses all of the limitations of the base claim, but fails to disclose providing switching circuitry for cross-connecting RF signal paths for enabling one of said SSs to function as a BS by transmitting on the first frequency and receiving on the second frequency. Moravan discloses supplying a control signal making a mobile station functioning in base station mode (column 1, lines 42-44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Anderson to make one of mobile stations functioned as a base station so that it would provide redundancy in case of failure of the primary base station.

Re claim 27, Anderson discloses a mobile communication system comprising mobile stations and base stations (*a communication system having subscriber stations (SS) and base stations (BS)*, column 14, lines 63-65). Anderson discloses using same traffic message structure for forward and reverse link communication (*arranging a forward link and a reverse link to operate with a common waveform*, figures 5b and 5c; column 8, lines 34-36). Anderson fails to disclose the forward link operating at a first frequency that is transmitted by the BS and received by the SS, and the reverse link operating at a second frequency that is transmitted by the SS and received by the BS. Watanabe discloses the mobile station receiving the first signal with the frequency f_1 and transmitting the second signal with the frequency f_2 (column 6, lines 20-25). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Anderson to have the forward link operating at a first frequency and the reverse link operating at a second frequency in order to avoid interference between base

stations and mobile stations. Anderson discloses an exemplary transmitter and receiver employed for spreading and dispreading signals by using a single chip sequence generator (*using common forward link and reverse link signal processing circuitry in the BS and individual ones of the SSs*, column 6, lines 37-43). Anderson fails to disclose providing switching circuitry for cross-connecting RF signal paths for enabling one of said SSs to function as a BS by transmitting on the first frequency and receiving on the second frequency. Moravan discloses supplying a control signal making a mobile station functioning in base station mode (column 1, lines 42-44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Anderson to make one of mobile stations functioned as a base station so that it would provide redundancy in case of failure of the primary base station.

Response to Arguments

6. Applicant's arguments filed 02/02/2006 have been fully considered but they are not persuasive.

On pages 11-12 the Applicant argues that Anderson does not disclose using common forward link and reverse link signal processing circuitry in the BS and individual ones of the SSs. Since it is not clearly recited in a claim what comprises common signal processing circuitry in the BS and SSs, for the purpose of the examination, the Examiner interprets a transmitter (a receiver), a modulator (a

demodulator) and a chip sequence transmitter generator (a chip sequence receiver generator) in a base station and user stations as a common forward (reverse) link signal processing circuitry.

The Applicant further argues that Anderson does not disclose how the transmitter and receiver are implemented in circuitry. The Examiner respectfully sees this argument as misplaced since the above feature upon which the Applicant relies is not recited in the rejected claim(s).

Therefore, the Examiner concludes that the rejection of claims is proper.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087.

The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc
Hong Cho
Patent Examiner
4/10/2006

Chau T. Nguyen
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